1 CLAIMS

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3   1.   A method for classifying messages, comprising the steps of:

4   recognizing patterns including words and groups of words in a messages;

5   applying a plurality of machine learning techniques responsive to the rec-

6 ognized patterns in order to classify the message.

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8   2.   A method as in claim 1, wherein the machine learning techniques

9 include neural networks.

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11   3.   A method as in claim 2, wherein the neural networks are pre-

12 trained to classify the message as a good message, a bulk message, or a spam message.

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14   4.   A method as in claim 2, wherein the neural networks further com-

15 prise at least two levels of neural networks.

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17   5.   A method as in claim 4, wherein the two levels of neural networks

18 include a first level that determines if the message is likely good or likely spam, and a

19 second level that determines if a likely good message is good and if a likely spam mes-

20 sage is spam.

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1   6.   A method as in claim 4, wherein the two levels of neural networks

2   include a first level that determines if the message is likely good or likely spam, and a

3   second level that determines if a likely good message is good or bulk and if a likely

4   spam message is spam or bulk.

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6   7.   A method as in claim 4, wherein for at least one of the classifica-

7   tions the neural networks classify the message in one of three classifications, wherein

8   more than one path through the neural networks exists for the message to arrive at that

9   classification.

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11   8.   A method as in claim 1, further comprising the step of dynamically

12   maintaining the neural networks responsive to classification of the message.

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14   9.   A method as in claim 1, further comprising the step of applying

15   rules to the message to help classify the message.

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17   10.   A method as in claim 9, wherein if the message is classified by the

18   rules, the step of applying the neural networks is skipped.

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20   11.   A method as in claim 9, wherein the rules utilize a whitelist, a

21   blacklist, or both the whitelist and the blacklist.

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1   12.   A method as in claim 11, further comprising the step of dynami-

2   cally maintaining the whitelist, the blacklist, or both the whitelist and the blacklist re-

3   sponsive to classification of the message.

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5   13.   A method as in claim 11, wherein the step of recognizing expres-

6   sions further includes the step of applying a genetic algorithm to select a set of regular

7   expressions to be recognized.